AF/2876

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

In re Patent Application of: Atty Dkt. 677-22
C# M#
GRIEU et al. Group Art Unit: 2876
Serial No. 09/806,907 Examiner: A. Kim
Filed: April 6, 2001 Date: July 9, 2003
Title: METHOD FOR EXCHANGING DATA BETWEEN AN AUTOMATIC DISPENSER AND A MICROCIRCUIT CARD

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Signature: _____

Appeal Brief OKN 7/20/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

GRIEU et al Atty. Ref.: **677-22**

Serial No. **09/806,907** Group: **2876**

Filed: **April 6, 2001** Examiner: **A. Kim**

For: **METHOD FOR EXCHANGING DATA BETWEEN AN AUTOMATIC DISPENSER AND A MICROCIRCUIT CARD**

* *

APPEAL BRIEF

On Appeal From Group Art Unit 2876

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I. REAL PARTY IN INTEREST

The real party in interest in the above-identified appeal is Regie Autonome des Transports Parisiens, by virtue of the Assignment from the inventors to Regie Autonome des Transports Parisiens recorded April 10, 2001, at Reel 011761, Frame 0450.

II. RELATED APPEALS AND INTERFERENCES

There are believed to be no related appeals or interferences with respect to the present application and appeal.

III. STATUS OF CLAIMS

Claims 3-5 and 7-17 stand rejected in the outstanding Final Rejection. The Examiner contends that claims 3-5 and 7-17 are either anticipated under 35 USC §102 or obvious under 35 USC §103 in view of the cited prior art.

IV. STATUS OF AMENDMENTS

No further response has been submitted with respect to the Final Official Action in this application.

V. SUMMARY OF THE INVENTION

The present invention relates to automatic transaction systems for the delivery of goods or services in which a machine exchanges information with a

portable object, hereinafter referred to as a card, which is then debited by a given amount or value in consideration for the delivery of the goods or services.

In the past, such card machine systems used the so-called "contactless" interconnection which has the difficulty in that, for any one of a number of reasons, the communications link between the card and the machine can be interrupted. If such an interruption occurs during a transaction, it is possible that the card user might obtain delivery of the goods or services while preventing the corresponding value from being debited from the card.

In the past this problem has been avoided by either a human procedure such as the machine owner or operator physically using the card, or physically preventing the card from being withdrawn by the user until after completion of a transaction, or the third type of situation in which the card remains physically accessible to the user.

In the third situation, if debiting of the card takes place after delivery of the services, the risk of loss can be acceptable, especially if the delivery is spread out in time, i.e. during a telephone call, where the advantage gained by removal of the card in the middle of a transaction is substantially limited. In other instances where the debit to the card takes place prior to delivery, the risk is that the purchaser will be out-of-pocket because the communication has been interrupted after the debiting of the card but before the delivery of the goods or services.

In some cards where value is loaded onto the card, there is an on-card flag which is set to indicate completion of a previous transaction prior to the initiation of a new transaction. This is the system in U.S. Patent 5,635,695 issued to Feiken wherein the title discloses the invention, i.e. "CHIP CARD BASED PAYMENT SYSTEM HAVING AN ON-CARD FLAG FOR SPECIFYING PROPER COMPLETION OF A PRIOR CARD BALANCE REPLENISHMENT SESSION."

In the Feiken system, the external machine places a flag on the card which can only be removed by the machine. Thus, if the card is withdrawn during a transaction, the flag initially placed by the machine with which it is communicating will remain on the card, thereby signaling to any subsequent user that the card is in the middle of a session and that the session must be completed prior to any new use of the card. Thus, the flag in Feiken indicates that the debiting of the card has been accomplished, and therefore it is ok to use the card for future purchases. Such systems require a network with all machines capable of using the cards so that the machines know whether the card being used is being used before a previously non-terminated transaction has been completed or not.

The appellants have derived a new method which avoids the need for a network in order to keep track of the status of card flags set on the individual cards by the machine or its network. In the present and inventive method, the card has

an internally set flag indicating whether the previous transaction took place correctly (the ratified state) or incorrectly (the non-ratified state) where the transaction may have been interrupted. The inventive system and method checks the card to see if the flag is in the ratified state. If it is, the card puts the flag in a non-ratified state, causes the goods or services requested to be delivered and then, if delivery takes place effectively in the preceding step, causes the flag to be put back into the ratified step.

Quite clearly, in the inventive system, if the card is withdrawn in the middle of the transaction, the worst that can happen is that the card will have its flag placed into the non-ratified state and will have the current transaction debited by updating the card's value information. Because this happens internally to the card, these method steps cannot be interrupted by withdrawal or other disruption of the communication link between the machine and the card. The card then issues an acknowledgment signal to the machine reading the card, indicating that the debit has been recorded and the machine subsequently delivers the goods or services. The machine then issues a command to the card to reset the flag in the ratified state and the card automatically accomplishes this function.

The big difference between the present invention and the Feiken and other prior art is that in Feiken the flag on the card can only be removed by the central

system. In the present invention, the flag on the card is removed by the internal recording of the debit by updating value information performed in the card itself.

Thus, the present invention is characterized by the steps **where the card or portable object "records the debit by updating the value information"** on the card and **"puts the flag into the non-ratified state."** Subsequently, the card **"issues to the machine an acknowledgment signal indicating that the debit has been recorded."** The delivery and resetting of the flag states follow.

VI. ISSUES

Whether claims 5 and 17 are anticipated by Feiken '695 (U.S. Patent 5,635,695).

Whether claims 3 and 9-11 are obvious under 35 USC §103 over Feiken '695 in view of Cheung (U.S. Patent 6,062,472).

Whether claims 4 and 16 are obvious under 35 USC §103 over Feiken '695.

Whether claims 7, 8 and 12 are obvious over Feiken '695 in view of Feiken '795 (U.S. Patent 6,070,795).

Whether claims 13-15 are obvious under 35 USC §103 over Feiken '695 in view of Everett (U.S. Patent 5,982,293).

VII. GROUPING OF CLAIMS

The rejected claims stand or fall together and are patentable as described in the argument portion of this Appeal Brief.

VIII. ARGUMENT

1. Discussion of the References

Feiken '695 (U.S. Patent 5,635,695) teaches a chip card based payment system in which an on-card flag is settable and removable only by the machine to which it is temporarily attached.

As previously discussed in the Summary of the Invention, Feiken '695 teaches at column 2, lines 21-24, that the flag "can be removed **only by the central system**" (emphasis added) which is concerned with increasing the balance. This system requires a cryptographic code in order to ensure that a fraudulent user cannot send a flag resetting code to the card. However, the flag when set by such an external central system indicates that the card debit is ok, thereby permitting the machine used with the Feiken '695 card to deliver its goods. As previously noted, the problem is that the use of such flags **set or reset by the central machine** requires the existence of a substantial network and a substantial cryptographic communication system with the cards for the setting of such flags.

There is no disclosure in Feiken '695 that the flag is indicative that the requested goods or services have actually been delivered to the card user. In fact,

Feiken '695 clearly teaches away from such a ratification system and is only concerned with the flag indicating that the card debit process is complete.

Cheung (U.S. Patent 6,062,472) teaches a system for restoring a transaction in response to an interruption of a value increase transaction.

There is no indication in the Cheung reference that the card itself puts the flag into a non-ratified state or that the flag is indicative that the machine has delivered the requested goods or services, rather than indicative of a non-interrupted transaction.

Feiken '795 (U.S. Patent 6,070,795) also relates to a method of recovering and completing an interrupted smart card transaction.

There is no indication in the Feiken '795 reference that the card itself puts the flag into a non-ratified state or that the flag is indicative that the machine has delivered the requested goods or services, rather than indicative of a non-interrupted transaction.

Everett et al (U.S. Patent 5,982,293) also relates to a transaction recovery for value transfer systems.

There is no indication in the Everett reference that the card itself puts the flag into a non-ratified state or that the flag is indicative that the machine has delivered the requested goods or services, rather than indicative of a non-interrupted transaction.

2. Discussion of the Rejections

Claims 5 and 17 stand rejected under 35 USC §102 as anticipated by Feiken '695. To the extent the Examiner's rejection is understood, he is believed to contend that the Feiken '695 references teaches each and every claimed method steps set out in the claims, including the step of having the card record the debit by updating value information and putting the flag into a non-ratified state in an indivisible manner and the step of using the flag to indicate that the machine has delivered the requested goods or services.

Claims 3 and 9-11 stand rejected under 35 USC §103 as being unpatentable over Feiken '695 in view of Cheung. To the extent it is understood, the Examiner believes Cheung to teach missing method steps which are admitted to be absent from the Feiken '695 teaching and apparently also believes there to be some motivation for combining Feiken '695 and Cheung.

Claims 4 and 16 stand rejected as obvious under 35 USC §103 over Feiken '695. The Examiner admits that Feiken fails to teach "a condition debiting of the card subordinate to the machine performing the transaction" and "memory within the card as recording the type of good and service being delivered during the transaction." Nonetheless, the Examiner appears to suggest that these features would somehow be obvious even in view of Feiken's failure to teach these method steps.

Claims 7, 8 and 12 stand rejected under 35 USC §103 as unpatentable over Feiken '695 in view of Feiken '795. The Examiner admits that Feiken '695 fails to teach information as exchanged by the card and machine as being previously encrypted by means incorporated both in the card and machine. However, the Examiner does not appear to indicate where this is shown in Feiken '795 or why it would be obvious to one of ordinary skill in the art to combine the two references.

Claims 13-15 stand rejected under 35 USC §103 as being unpatentable over Feiken in view of Everett. The Examiner admits that Feiken fails to teach "the counting of occasions the flag is read in a non-ratified state" and appears to believe this is shown in Everett. The Examiner also assumes that one of ordinary skill in the art would be motivated to combine portions of the Everett teachings with the Feiken '695 teaching.

3. The Errors in the Final Rejection

There are at least three significant errors in the Final Rejection and they are summarized as follows:

(a) No prior art reference teaches having the card put the flag into the non-ratified state;

(b) No prior art reference uses the flag for indicating delivery of goods or services; and

(c) The Examiner provides no reason for combining prior art references.

(a) No prior art reference teaches having the card put the flag into the non-ratified state

Appellants' independent claim 17, from which all other claims depend, specifies that the portable object (hereinafter referred to as "the card") stores value information and a ratification flag. Furthermore, the claim specifies under section c) that **the card** accomplishes the steps of **recording "the debit by updating the value information"** and **putting "the flag into the non-ratified state"** (the two substeps in step c) and that these substeps are "performed in an indivisible manner." Thus, the claimed method step has the card performing the step of putting the flag into a non-ratified state in an indivisible manner with the step of recording the debit by updating value information.

As admitted by the Examiner, the Feiken '695 reference does not perform these steps and instead it is the central system which controls the flag on the card ("provision is preferably made that **the flag can be removed only by the central system**" column 2, lines 21-23, emphasis added). Therefore, Feiken '695 does not teach the claimed method steps, and the Examiner has failed to allege that any other reference teaches these method steps.

The Court of Appeals for the Federal Circuit has noted in the case of *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 USPQ 481, 485 (Fed. Cir. 1984) that "[a]nticipation requires the presence in a single prior art

reference disclosure of each and every element of the claimed invention, arranged as in the claim."

In view of the fact that the Examiner has not indicated how or where the Feiken '695 reference teaches the method steps recited in appellants' independent claim 17, all rejections of claim 17, or claims dependent thereon, clearly fail under 35 USC §102.

Moreover, the Court of Appeals for the Federal Circuit has consistently held that "the PTO has the burden under §103 to establish a *prima facie* case of obviousness." *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). The Court in this case went on to say that the PTO "can satisfy this burden only by showing some objective teaching in the prior art." In the present instance, the Examiner has failed to provide any indication that the above-discussed feature of appellants' independent claim 17 is disclosed in any prior art reference, let alone Feiken '695. As a result, claim 17 and claims dependent thereon cannot be obvious, since the Examiner has failed to establish a *prima facie* case of obviousness.

(b) No prior art reference uses the flag for indicating delivery of goods or services

Appellants' independent claim 17 also states that the "machine delivers the goods or service" and subsequent thereto the card "puts the flag into the ratified state." In other words, after the machine delivers the requested goods or services,

the card itself puts the flag into the ratified state (in response to the machine issuing a command for the same). Again, as noted above, the Examiner has failed to indicate how or where any prior art reference teaches a sequence of method steps in which the card itself puts the flag into a state indicative of the machine having delivered the requested goods or services.

Of course, absent any such teaching in the prior art references, as noted in the cases cited above, the subject matter of claim 17 and the claims dependent thereon cannot be anticipated or obvious under 35 USC §102 or §103.

(c) The Examiner provides no reason for combining prior art references

The Court of Appeals for the Federal Circuit has held in the case of *In re Rouffet*, 47 USPQ2d 1453, 1457-8 (Fed. Cir. 1998) that

> "to prevent the use of hindsight based on the invention to defeat patentability of the invention, this court **requires** the examiner to show a motivation to combine the references that create the case of obviousness. In other words, **the Examiner must show reasons** that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." (emphasis added).

The Examiner has failed to provide any indication that the cited prior art references are even aware of the problem solved by appellants' invention or that they are addressing that problem. Rather, the Examiner has merely referred to portions of different references which in his view may relate to aspects of the

claimed invention. This simply does not meet the "motivation" required for one of ordinary skill in the art to combine prior art references.

Additionally, it is also noted that the Examiner, after admitting that the prior art fails to provide any evidence with respect to the features of claims 4 and 16, says that these concepts are "notoriously well known in the art" or are "well known in the art." This is insufficient to establish that these method steps are known or that their combination with the cited prior art would be obvious to one of ordinary skill in the art.

As a result, the Examiner has failed to meet the judicial requirements of establishing motivation for the combination of prior art, and therefore the rejections under 35 USC §103 fail.

IX. CONCLUSION

None of the prior art references teach any system by which the card itself both records the debit by updating the value information and puts the flag on the card into a non-ratified state in an indivisible manner. None of the prior art references teach the sequence of steps in which the flag is indicative of the delivery of goods and services. In addition to the above failures, none of the prior art references contain any teaching which would motivate one of ordinary skill in the art to combine features of the prior art references in the manner of appellants' independent claim 17 or claims dependent thereon. For any one of the above

reasons, the rejections under 35 USC §102 and §103 fail. In view of all of the above reasons, there is simply no basis for continued rejection of the claims in this case.

Thus, and in view of the above, the rejection of claims 3-5 and 7-17 over the cited prior art is clearly in error and reversal thereof by this Honorable Board is respectfully requested.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____

Stanley C. Spooner
Reg. No. 27,393

SCS:kmm
Enclosures
Appendix A - Claims on Appeal

APPENDIX A

Claims on Appeal

3. The method of claim 17, in which performing step c1 is subordinate to a time delay elapsing since the preceding operation of putting the flag into the non-ratified state.

4. The method of claim 17, in which performing step c1 is subordinate to the machine performing the current transaction belonging to a group to which the machine that performed the preceding transaction also belongs.

5. The method of claim 17, in which, when the flag is in the non-ratified state, delivery without debit is inhibited if the machine detects that delivery took place during the preceding use of the object.

7. The method of claim 17, in which at least a portion of the information modifying the state of the object, in particular commands enabling the flag to be put into the ratified state, is previously processed by cryptographic means implemented both in the object and in the machine.

8. The method according to claim 17, in which

at least a portion of the information relating to the state of the object, in particular the state of the flag and confirmation that the debit has taken into account, is previously processed by cryptographic means implemented both in the object and in the machine.

9. The method of claim 17, in which the goods or service is delivered in deferred manner after a given time delay.

10. The method of claim 9, in which delivery takes place prior to the expiry of the time delay in the event of receiving confirmation that the object has been successful in putting the flag into the ratified state.

11. The method of claim 9, in which a pause of random duration is included in the transaction.

12. The method of claim 17, in which the information interchanged between the machine and the object is enciphered in such a manner as to avoid revealing the moment at which the machine instructs the object to put the flag into the ratified state, or the moment at which the object performs that instruction.

13. The method of claim 17, including, in the machine, counting the number of occasions on which it reads a flag in the non-ratified state.

14. The method of claim 17, including the object counting the number of occasions on which it stores the flag in the non-ratified state between two transactions.

15. The method of claim 13, in which means are provided to indicate that a given threshold has been exceeded by the count in the object, in particular means for inhibiting subsequent delivery of goods or service.

16. The method of claim 17, in which the object memory includes information about the kind of goods or service to be delivered, which information is updated before any delivery of said goods or service.

17. A method of interchanging data between the non-volatile memory of a portable object and an automatic machine with which the portable object is temporarily coupled to enable goods or service to be delivered, the portable object storing in said non-volatile memory value information that can be debited by the machine in consideration for delivering the goods or service, and a ratification flag

having two states, a ratified state and a non-ratified state, wherein the method comprises the successive following steps:

a) the machine reads the state of the flag and jumps to step e) if said flag is in the non-ratified state;

b) the machine issues to the portable object a command for debiting said value information by an amount corresponding to the goods or service to be delivered;

c) the portable object:

c1) records the debit by updating the value information, and

c2) puts the flag into the non-ratified state,

said sub-steps of recording the debit and putting the flag into the non-ratified state being performed in indivisible manner;

d) the portable object issues to the machine an acknowledgement signal indicating that the debit has been recorded;

e) the machine delivers the goods or service;

f) the machine issues to the portable object a command for setting the flag to the ratified state; and

g) the portable object puts the flag into the ratified state.--